REMARKS

Claims 21-36 remain in this application. Claims 1-20 have been canceled, without prejudice. By these amendments, no new matter has been added.

The invention provides a novel method and architecture for managing bandwidth usage that, unlike prior art systems, does not require any special analysis or other processing of data packets passing through a communication link, such as a router. Prior art systems interpose a traffic management application between a communication link and a local network or other group served by the link. The application analyses and prioritizes data passing through a point in the network data path upstream of the link. This requires considerable computing overhead that can noticeably slow network response times during peak periods, and creates a new bottleneck in the data stream. Thus, in these prior art systems, actual available bandwidth is reduced for all users, not just those requesting low-priority data.

The invention avoids these disadvantages by pushing back traffic control measures to a lower, diffuse network level. That is, traffic control measures are pushed back to the source of data that is transmitted through the communication link. These source servers implement traffic control measures by applying rules that are adapted in response to bandwidth utilization. Traffic is allowed to pass freely through the communication link, without requiring further traffic management or passing through any additional bottlenecks. Only those low-priority uses specifically targeted by the traffic control measures are affected. Higher-priority uses are not affected.

The Examiner rejected Claims 2 and 3 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement required. Claims 2 and 3 have been cancelled, and all of the claims presently pending are believed to be sufficiently enabled. These rejections should therefore be withdrawn.

The Examiner rejected Claims 1-20 under 35 U.S.C. § 102(e) as being anticipated by Rakoshitz. Claims 1-20 have been cancelled, and these rejections are therefore moot. These rejections should therefore be withdrawn.

LA2:741396.1

In addition, Rakoshitz and the other references of record pose no bar to patentability of new Claims 21-36. Rakoshitz provides merely another example of prior art already acknowledged by Applicants as a "prior art pure-software approach to bandwidth management" with "too much operating system overhead and throughput rarely exceed[ing] 1000 Kb/s." (App. p. 3, l. 11-14.) These deficiencies arise in Rakoshitz, because the traffic management application is placed in the data stream, interposed between a source network or group and its gateway router. Figs. 1, 4-7 of Rakoshitz all show this configuration, in different embodiments. The accompanying description for Figs. 4-7, at col. 11:3-61, also describes this architecture repeatedly. For example, Rakoshitz teaches that "the [traffic management] tool 405 is coupled between the ISP LAN and router 407, which is connected to Internet 409." (Col. 11:11-13.)

In response to the Examiner's argument in paragraph 11 of the Office Action, Applicant submits that the statement by Rakoshitz that "[t]he [bandwidth management] tool can be deployed an any appropriate point in the network data path" (col. 9:33-34) does not amount to a disclosure of the distributed architecture of the present invention. A position at a "point in the network data path" is required. This plainly teaches away from distribution of functions to a plurality of servers in a diffuse source layer, as the present invention defines. Far from disclosing any feature of the invention, this portion of Rakoshitz teaches away from the claimed combination.

Rakoshitz therefore fails to disclose or suggest, and teaches away from, operating a server group to limit serving of specified file types during periods of high bandwidth, and informing the individual servers of the group of a current bandwidth usage state using a monitoring software, as defined by Claim 21. Likewise, Rakoshitz fails to disclose or suggest separate software distributed as defined by Claim 29, with monitoring and communicating functions performed in association with a communication link, and characterizing and serving functions, including implementation of bandwidth management rules, at the server level. Dependent Claims 22-27 and 30-36 are also allowable, at least as depending from allowable base claims.

Applicant further submits that Rakoshitz fails to disclose or suggest crawling through stored server files to characterize certain file types, as defined by Claims 24-25 and 32-33. The Examiner cited col. 15:42-67 for characterization of linked files, but appears to have misread this portion of Rakoshitz, which merely discusses classification of traffic flow into groups. In no way does this disclose or suggest identifying linked files in a storage device. Likewise, the Examiner seems to have misread col. 16:1-21, which merely mentions that "link-state" may be considered in prioritizing traffic flows. Although the meaning of "link-state" is quite unclear, whatever is meant by it, Rakoshitz certainty does not disclose crawling through server storage devices to identify unlinked files.

In view of the foregoing, the Applicant respectfully submits that Claims 21-36 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. If it would be helpful to placing this application in condition for allowance, the Applicant encourages the Examiner to contact the undersigned counsel and conduct a telephonic interview.

To the extent necessary, Applicant petitions the Commissioner for a one-month extension of time, extending to March 4, 2005, the period for response to the Office Action dated November 4, 2004. The Commissioner is authorized to charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,

Date: February 15, 2005

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LA2:741396.1